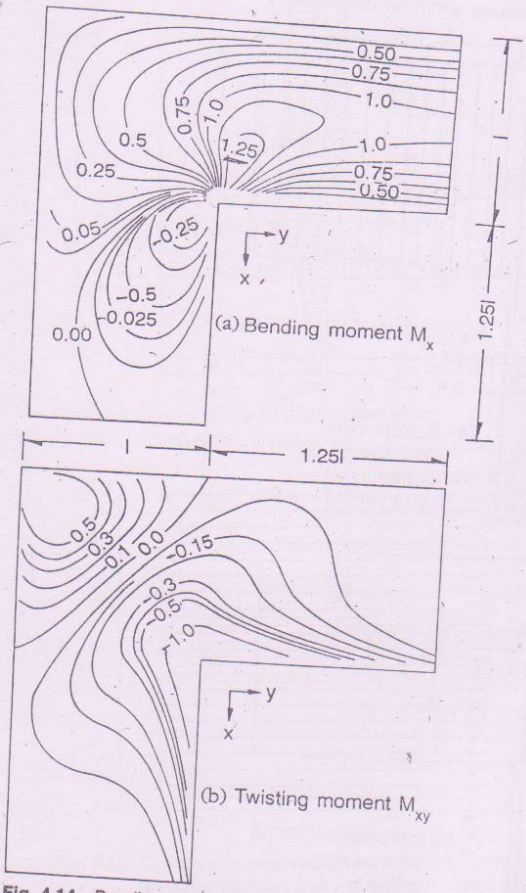

Fig. 4.14 Bending and twisting moments in corner slab (factor = $wl^2/8$)

4.3.5 Cantilever Corner Slab

Concentration of moments at the re-entrant corner has to be considered while detailing the reinforcement in an overhanging corner slab. The moment at the corner is more than three times that in a cantilever slab.[53] Distribution of the moment m_x along a support and at a distance of half the overhang length ($l/2$) from the re-entrant corner is indicated in Figure 4.16. Franz[53] suggests that the slab thickness in the corner should be adequate to resist a moment equal to wl^2 (w = intensity of loading per unit area of slab). It is considered adequate

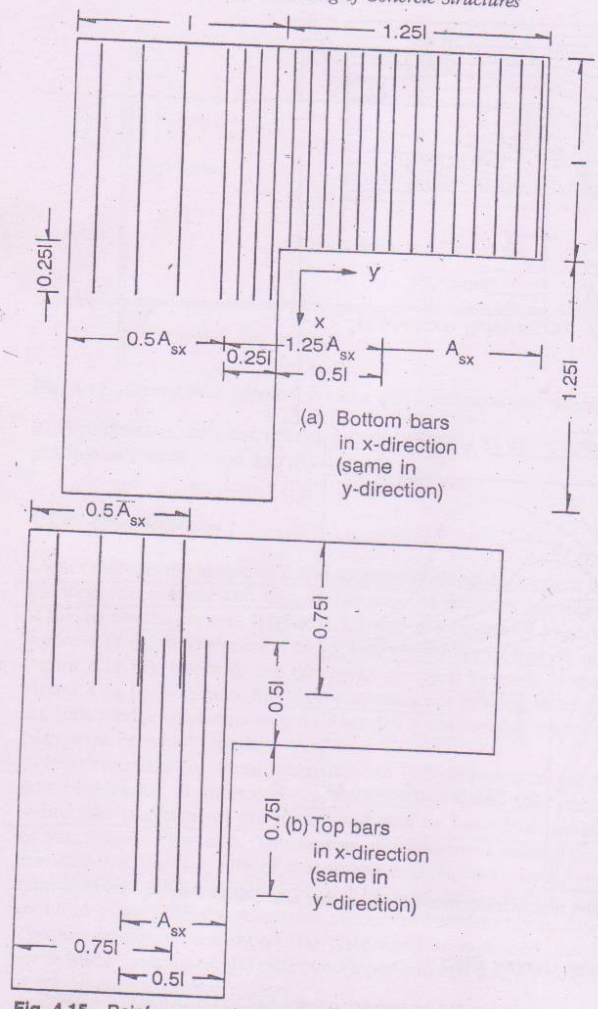

Fig. 4.15 Reinforcement in corner slab (Distribution and corner bars not shown)

if the reinforcement in the corner region extending to $l/2$ in each direction is double that in the cantilever slab away from the corner. The reinforcement in the corner region over a length of $l/2$ should be designed to resist a moment equal to twice that in the cantilever (i.e. for a moment of wl^2). This

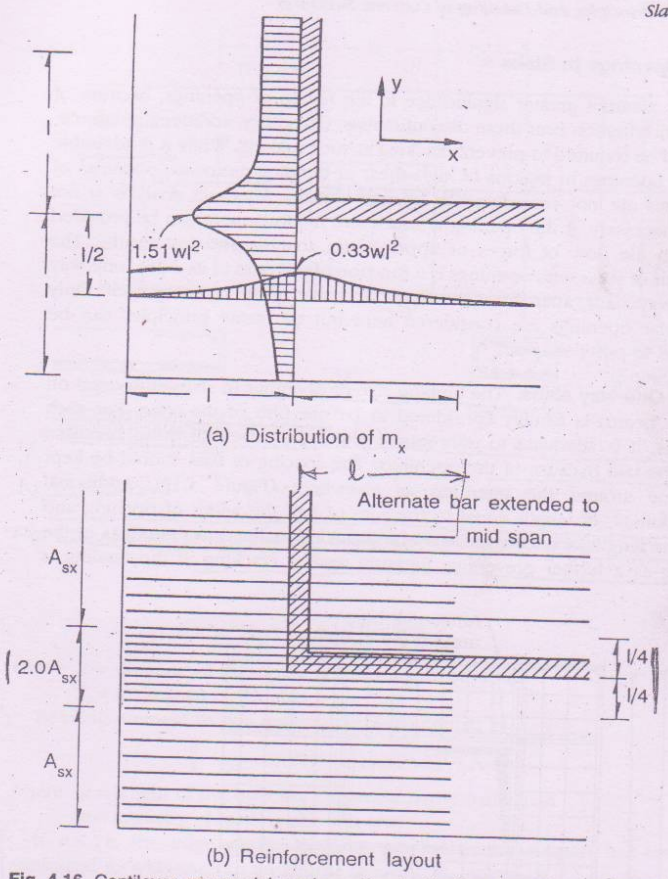

Fig. 4.16 Cantilever corner slab under uniformly distributed loading (Moments and reinforcement layout in *y*-direction obtained by reversing the axes)

reinforcement should be spread symmetrically about the corner as shown in Figure 4.16 (b). That is, the reinforcement in the corner region should be twice that in the slab away from the corner. These bars should be anchored properly in the main slab. The suggested anchorage length is equal to the overhang, and alternate bars are extended upto the midspan of the main slab for proper anchorage. Figure 4.16 (b) shows only the distribution of moment and reinforcement in *x*-direction; those in *y*-direction can be obtained by reversing the axes. Distribution reinforcement, not indicated in the figure, should be provided in the slab as per the code of practice.